

# A NEW SPECIES OF THE GENUS *HYPOASPIS* FROM NINGXIA, CHINA WITH SUPPLEMENTARY DESCRIPTION OF *HYPOASPIS SUBPICTUS* GU ET BAI (ACARI, LAELAPIDAE)

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**Abstract** This paper describes a new species *Hypoaspis* (*Cosmolaelaps*) *guoi* sp. nov. (Acari, Laelapidae) and provides made some supplementary description on *Hypoaspis* (*Cosmolaelaps*) *subpictus* Gu et Bai, 1992. The type specimens of the new species were collected from Haiyuan County of Ningxia Hui Autonomous Region, China. All the type specimens are deposited in the Collection of the Medical Entomology of Institute of Microbiology and Epidemiology Academy of Military Medical Science, Beijing, China.

***Hypoaspis* (*Cosmolaelaps*) *guoi* sp. nov.** (Figs 1–9)

Female. The new species is similar to *Hypoaspis* (*Cosmolaelaps*) *subpictus* Gu et Bai, 1992, but can be easily differentiated from the latter by: 1) dorsal plate bearing 39 pairs of round leaf-like setae with dot nets and  $D_{7,8}$  with one unpaired seta; 2) slightly concaved anterior margin of sternal plate and  $St_1$  on the palte with two large lyrifissures organs; 3) triangle-shaped anal

plate with V-shaped spines area on the plate.

Holotype ♀ and paratype 1 ♀, collected by BAI Xue-Li, 19 May 1989, from a nest of *Myrmos* sp. in Haiyuan County (36.5°N, 105.6°E) of Ningxia Hui Autonomous Region, China.

Etymology. This new species is named in honour of Pro. GUO Xian-Guo (Dali University, China).

***Hypoaspis* (*Cosmolaelaps*) *subpictus* Gu et Bai, 1992** (Fig. 10)

*Hypoaspis subpictus* Gu et Bai, 1992. *Acta Zootaxonomica Sinica*, 17 (2): 189, figs 12–17.

Female. Light yellow. Genito-ventral plate tongue-shaped, with one pair of setae as shown in Fig. 10.

Specimens examined. 2 ♀ ♀, collected by BAI Xue-Li, 12 June 1988, from a nest of *Myrmos* sp. in Haiyuan County (36.5°N, 105.6°E) of Ningxia Hui Autonomous Region, China.

**Key words** Acari, Mesostigmata, Laelapidae, *Hypoaspis*, new species.

## 中国宁夏下盾螨属一新种及轻绘下盾螨形态补充描述 (蜱螨亚纲, 厉螨科)

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**摘要** 描述宁夏下盾螨属 *Hypoaspis* Canestrini, 1885 1 新种, 郭氏下盾螨 *Hypoaspis* (*Cosmolaelaps*) *guoi* sp. nov. 及轻绘下盾螨 *Hypoaspis* (*Cosmolaelaps*) *subpictus* Gu et Bai, 1992 的形态补充, 标本均采自宁夏海原县红羊地区蚂蚁 *Myrmos* sp. 巢穴中, 保存于军事医学科学院微生物流行病学研究所医学昆虫标本馆。

**关键词** 蜱螨亚纲, 中气门目, 厉螨科, 下盾螨属, 新种。

**中图分类号** Q959.220

下盾螨属 *Hypoaspis* 系 Canestrini 于 1885 年建立, 隶属于厉螨科 Laelapidae Berlese, Karg (1979) 将其分为 8 个亚属: 即 *Hypoaspis* Canestrini, *Hypohasta* Karg, *Cosmolaelaps* Berlese, *Alloparasitus* Berlese, *Geolaelaps* Tragardh, *Pneumolaelaps* Berlese, *Holostaspis* Kolenati, *Laelaspis* Berlese, Evans and Till (1979) 将如下亚属 *Cosmolaelaps*, *Holostaspis*, *Pneumolaelaps*,

*Laelaspis* 提升为属。作者仍采用 Karg (1979) 的分类系统。

该属全世界已记录 170 余种, 分布于 5 大洲。我国已记录 60 余种 (亚种), (邓国藩等, 1993; 白学礼等, 1993、1994、1995、2002、2005; 贝纳新等, 2003; 顾以铭等, 1990、1991、1992; 刘明立等, 1996; 马立名等, 1996、1997、1998、2000、2003、

2004、2009、2010)。

笔者于1989年在宁夏海原县红羊地区蚂蚁 *Myrmos* sp. 巢穴与洞道内采得大量中气门目螨类, 在近期制作标本时发现下盾螨属 *Hypoaspis* Canestrini, 1885 1 新种, 记述新种并对轻绘下盾螨 *Hypoaspis subpictus* Gu et Bai, 1992 形态进行更正性补充描述。

采用 Zachvatkin (1948) 的毛序系统。文中测量单位为  $\mu\text{m}$ 。

1 郭氏下盾螨, 新种 *Hypoaspis* (*Cosmolaelaps*) *guoi* sp. nov. (图1~9)

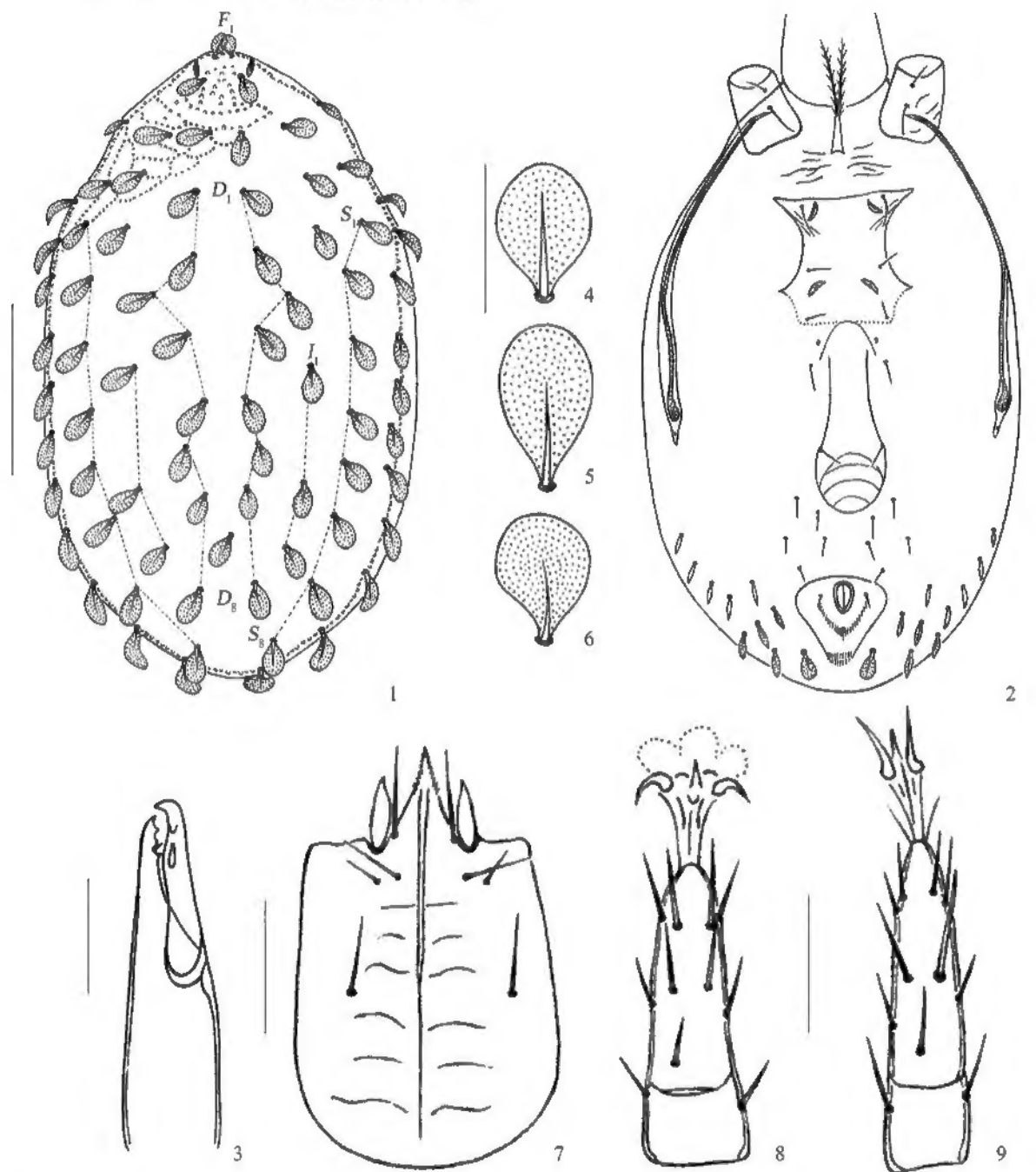


图1~9 郭氏下盾螨, 新种 *Hypoaspis* (*Cosmolaelaps*) *guoi* sp. nov., ♀

1. 背面 (dorsum) 2. 腹面 (venter) 3. 螯钳 (chelicera) 4~6. 背毛, 左:  $F_1$ ,  $D_2$ ,  $S_8$  (dorsal setae, left:  $F_1$ ,  $D_2$ ,  $S_8$ ) 7. 颚体 (gnathosoma) 8. 跗节II (tarsus II) 9. 跗节IV (tarsus IV) 比例尺 (scale bars): 1~2 = 100  $\mu\text{m}$ , 3~6 = 20  $\mu\text{m}$ , 7~9 = 30  $\mu\text{m}$

雌螨 体淡黄色, 卵圆形, 躯体长 376 (365 ~ 386), 宽 230 (224 ~ 235)。背板几覆盖背部, 长 371

(361 ~ 381), 宽 217 (213 ~ 221), 具叶状刚毛 39 对, 叶面具点状纹,  $F_1$  长 18、 $D_2$  24、 $S_8$  26, 在  $D_{7,8}$

之间具附加毛1根。背板具瘤状网纹及隙孔。

颚体下缘至颚角尖90, 基部宽69, 颚毛3对, 光滑, 额前毛长26, 颚内毛22, 额外毛10。螯肢长130, 动趾长33, 具2齿, 定趾具3齿, 钳齿毛短小。须肢叉毛2分叉。头盖未看到。

胸叉蒂部长18, 基部宽11, 叉丝长60。胸板前具网纹。胸板中部略凹, 长72, 第2对隙孔处宽58, 胸板后缘骨化弱, 界限不清, 板上具3对光滑刚毛,  $S_1$  长21,  $S_2$  17,  $S_3$  15,  $Mst$  长14, 隙孔2对巨大。生殖腹板近舌状, 长108, 宽38, 生殖毛1对, 长14。肛板近三角形, 长62 (57~67), 宽57 (54~60),  $Ad$  位于肛孔中横线之上, 与  $PA$  近等长 (9) 肛板中部具V字形棘区。各板具网纹。腹表皮具刚毛15对。位于中部生殖腹板与肛板之间的5对细小常形, 腹面两侧的10对呈叶状。气门沟向前延伸至基节I中后部。

各足长: I = 256, II = 242, III = 159, IV = 242。各足背面有叶形毛。跗节II腹面具5根刺状刚毛, 跗节IV腹面具1根粗的刺状刚毛, 形状如图9。

词源: 新种种名源自我国螨类学家郭宪国教授的姓氏, 以示敬意。

新种与轻绘下盾螨 *Hypoaspis* (*Cosmolaelaps*) *subpictus* Gu et Bai, 1992 十分相似, 但具下列区别: 1) 新种背毛39对, 多数呈圆叶状, 叶面具点状网纹, 在  $D_{7-8}$  之间具副毛1根, 后种背毛39对, 叶状, 1侧内凹呈镰状, 叶面无刻点, 在  $D_{6-8}$  之间具副毛3根; 2) 新种胸板前缘较平, 微略凹,  $S_1$  在板内, 2对隙孔巨大, 后种胸板前缘呈“V”形深凹,  $S_1$  及第1对隙孔在板外, 隙孔常态; 3) 新种肛板三角形, 中部具“V”字形棘区, 后种肛板倒梨形, 中部无“V”字形棘区。

雄螨、若虫未采得。

正模♀, 副模1♀, 宁夏回族自治区海原县红羊地区蚂蚁 *Myrmos* sp. 巢穴中, 1989-05-19, 白学礼采, 保存于军事医学科学院微生物流行病学研究所医学昆虫标本馆。

## 2 轻绘下盾螨 *Hypoaspis* (*Cosmolaelaps*) *subpictus* Gu et Bai, 1992 (图10)

*Hypoaspis subpictus* Gu et Bai, 1992. *Acta Zootaxonomica Sinica*, 17 (2): 189, figs 12-17.

雌螨 体淡黄色, 胸板后缘及生殖腹板前缘骨化特浅, 几乎无法看清界限, 作者在制作标本的过程中, 曾多次镜检标本, 记录该种生殖腹板为舌形, 生殖毛1对, 形状如图10。足后板未看到。1992年顾以铭、白学礼在“蚁巢下盾螨二新种 (蜱螨亚纲, 厉螨科)”一文中记述的轻绘下盾螨 *Hypoaspis*

*subpictus* Gu et Bai, 1992, 生殖腹板后部呈草形, 系错误描述, 予以订正。

标本: 1♀ (正模), 1♀ (副模), 宁夏回族自治区海原县红羊地区蚂蚁 *Myrmos* sp. 巢穴中, 1988-06-12, 白学礼采。

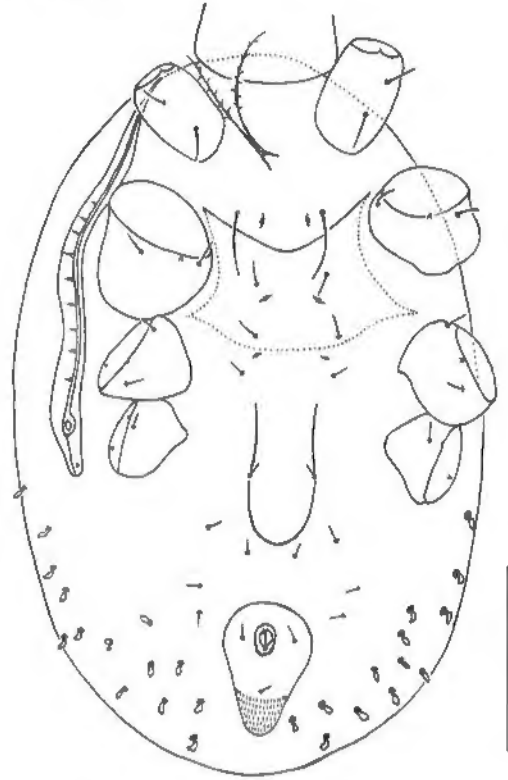


图10 轻绘下盾螨 *Hypoaspis* (*Cosmolaelaps*) *subpictus* Gu et Bai, 1992, 腹面 (venter)

比例尺 (scale bar) = 100  $\mu$ m

### 中国下盾螨属厉螨亚属雌螨分种检索表

- 1 (30) 背板刚毛刀状, 单侧突起
- 2 (7) 背板后部明显收缩, 背毛突起尖锐
- 3 (4) 胸板侧缘平齐 ..... 矛状下盾螨 *H. (C.) hastatus*
- 4 (3) 胸板侧缘有凹刻
- 5 (6) 大部背毛末端不达下位毛基, 附加毛2根 ..... 尖背下盾螨 *H. (C.) acutiscutis*
- 6 (5) 大部背毛末端稍超过下位毛基, 附加毛1根 ..... 拟尖背下盾螨 *H. (C.) subacutiscutis*
- 7 (2) 背板后部宽圆, 背毛突起宽钝
- 8 (9) 生殖腹板后部强度膨大, 圆形 ..... 网状下盾螨 *H. (C.) reticulatus*
- 9 (8) 生殖腹板后部不膨大或稍膨大, 不呈圆形
- 10 (11) 背毛粗壮, 生殖腹板前部有纵行粗条纹 ..... 壮毛下盾螨 *H. (C.) robustochaetes*
- 11 (10) 背毛较细弱, 生殖腹板前部无纵行粗条纹
- 12 (13) 背毛细长, 末端明显超过下位毛基有骨化很强的胸前板, 板前缘有深色带 ..... 细毛下盾螨 *H. (C.) leptochaetes*
- 13 (12) 背毛短, 末端不超过下位毛基, 无胸前板或胸前板骨化较弱, 无深色带
- 14 (17) 背毛很短, 末端仅达到与下位毛基部距离的中点

- 15 (16) 背板附加毛 3 根, 螯钳定趾在 2 齿之间有几个小齿 ..... 松江下盾螨 *H. (C.) sungaris*
- 16 (15) 背板附加毛 2 根, 螯钳定趾 4 齿约等大 ..... 青海下盾螨 *H. (C.) qinghaiensis*
- 17 (14) 背毛较长, 末端接近或达到下位毛基
- 18 (21) 生殖腹板前后约等宽
- 19 (20) 背板附加毛 2 根, 足后板的大板较宽, 呈棒状 ..... 空洞下盾螨 *H. (C.) vacua*
- 20 (19) 背板附加毛 3 根, 足后板的大板很细, 呈线形 ..... 宁夏下盾螨 *H. (C.) ningxiaensis*
- 21 (18) 生殖腹板后部宽于前部
- 22 (25) 有骨化很弱的胸前板
- 23 (24) 足后板的大板短杆状, 很小 ..... 力氏下盾螨 *H. (C.) lishi*  
(= 沈阳下盾螨 *H. (C.) shenyangensis* Bei, Shi et Yin, 2003)
- 24 (23) 足后板的大板弯月形, 较大 ... 胸副下盾螨 *H. (C.) sorecis*
- 25 (22) 无胸前板
- 26 (27) 胸板长明显大于宽, 生殖腹板狭窄, 足后板的大板弯月形 ..... 李氏下盾螨 *H. (C.) leeae*
- 27 (26) 胸板长宽略相等, 生殖腹板较宽, 足后板的大板杆状
- 28 (29) 生殖腹板后部外凸较缓, 肛板倒梨形, 足后板较短 ..... 黔下盾螨 *H. (C.) qianensis*  
(= 合肥下盾螨 *H. (C.) hefeiensis* Xu et Liang, 1996)
- 29 (28) 生殖腹板后部外凸明显, 肛板倒三角形, 足后板较长 ..... 宽腹下盾螨 *H. (C.) robustoventralis*
- 30 (1) 背板刚毛叶状, 双侧外凸
- 31 (32) 背毛多呈楔形, 顶端变宽并有缺刻 ..... 拟模下盾螨 *H. (C.) paracumeifer*
- 32 (31) 背毛多呈叶片状, 顶端变尖
- 33 (34) 背毛多呈圆形, 表面密布刻点, 胸部 2 对腺孔均巨大 ..... 郭氏下盾螨, 新种 *H. (C.) guoi* sp. nov.
- 34 (33) 背毛较狭, 但狭窄程度不同, 表面无刻点, 胸部腺孔常形
- 35 (38) 多数或个别背毛边缘有细长突起
- 36 (37) 背毛  $I_2 \sim I_5$  双侧有细长突 ..... 陈氏下盾螨 *H. (C.) chenchuanhoi*
- 37 (36) 多数背毛单侧有细长突 ..... 似李下盾螨 *H. (C.) lisimilis*
- 38 (35) 背毛边缘均平滑
- 39 (40) 背毛多呈弯形叶片状 ..... 轻绘下盾螨 *H. (C.) subpictus*
- 40 (39) 背毛多呈直形叶状
- 41 (44) 背毛多呈棱形叶片状
- 42 (43) 生殖腹板后部宽于前部, 螯钳较长, 定趾 3 齿 ..... 兵下盾螨 *H. (C.) miles*
- 43 (42) 生殖腹板前后等宽, 螯钳较短, 定趾 5 齿 ..... 王氏下盾螨 *H. (C.) wangae*
- 44 (41) 背毛多呈狭窄叶状
- 45 (46) 背毛呈长带叶状 ..... 叶氏下盾螨 *H. (C.) yeruiyuae*
- 46 (45) 背毛呈狭短叶状
- 47 (54) 背毛多数中部突然收缩变狭
- 48 (51) 背毛多数为基段单侧外凸, 末段稍宽, 中间形成狭窄部分
- 49 (50) 生殖腹板前后等宽, 气门沟中部外侧平滑 ..... 金氏下盾螨 *H. (C.) chini*
- 50 (49) 生殖腹板后部宽于前部, 气门沟中部外侧具齿状突 ..... 李氏下盾螨 *H. (C.) liae*
- 51 (48) 背毛基段和末段均为双侧稍变宽, 中间形成狭窄部分

- 52 (53) 中列背毛末端稍超过下位毛基 ..... 峡江下盾螨 *H. (C.) xiajiangensis*
- 53 (52) 背毛末端接近下位毛基 ..... 网纹下盾螨 *H. (C.) retirugi*
- 54 (47) 背毛自基部向末端逐渐变宽, 无突然收缩变狭部分
- 55 (56) 背板后部明显收缩, 后端较尖, 背毛基部两侧无外突生殖腹板前部约与后部等宽 ... 钝毛下盾螨 *H. (C.) obtusisetosus*
- 56 (55) 背板后部缓慢收缩, 后端宽圆, 多数背毛基部有单侧外突生殖腹板前部较后部明显狭窄 ..... 拟棒下盾螨 *H. (C.) quasiclaviger*

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